IN THE CLAIMS

Please cancel claims 1-2 without prejudice. Please amend claim 3, and please add claims 35 and 36 as follows:

1.   (Canceled)

2.   (Canceled)

3.   (Currently Amended)   A method for the measurement of differential heat flux, said method comprising the steps of:

(a) providing a heat transfer reference surface;

(b) providing a heat transfer fouling surface;

(c) providing a heat transfer path capable of transferring heat flux between said reference surface and said fouling surface;

(d) providing a pair of heat flux sensors for measuring differential heat flux data across said heat transfer path;

(e) utilizing said differential heat flux data to detect and quantify deposit accumulation at said fouling surface.

4.   (Original) The method of claim 3 wherein said differential heat flux data is calculated according to the formula $\Delta Q_t = Q_r - C \cdot Q_f$.

5.   (Original) The method of claim 3 wherein said reference surface is provided by mechanical brushing.

6.   (Original) The method of claim 4 wherein said reference surface is provided by mechanical brushing.

7.   (Original) The method of claim 3 wherein said reference surface is provided by sonic waves.

8.   (Original) The method of claim 4 wherein said reference surface is provided by sonic waves.

9.   (Original) The method of claim 3 wherein said reference surface is provided by an electronic device capable of maintaining a constant reference heat flux on said reference surface.

10.   (Original) The method of claim 4 wherein said reference surface is provided by an electronic device capable of maintaining a constant reference heat flux on said reference surface.

11.   (Original) The method of claim 3 wherein said reference surface is provided by a non-fouling fluid.

12.   (Original) The method of claim 11 wherein said non-fouling fluid is deionized water.

13.   (Original) The method of claim 11 wherein said non-fouling fluid is synthetic cooling fluid.

14.   (Original) The method of claim 11 wherein said non-fouling fluid is a combination of fluid exiting from the fouling tube and antifouling chemicals.

15.   (Original) The method of claim 4 wherein said reference surface is provided by a non-fouling fluid.

16.	(Original) The method of claim 15 wherein said non-fouling fluid is deionized water.

17.	(Original) The method of claim 15 wherein said non-fouling fluid is synthetic cooling fluid.

18.	(Original) The method of claim 15 wherein said non-fouling fluid is a combination of fluid exiting from the fouling tube and antifouling chemicals.

19.	(Original) The method of claim 3 further comprising the steps of:

(a)	generating a signal indicative of said heat flux data;

(b)	transmitting said signal to a microprocessor which continuously calculates, records, and displays said heat flux data.

20.	(Original) The method of claim 4 further comprising the steps of:

(a)	generating a signal indicative of said heat flux data;

(b)	transmitting said signal to a microprocessor which continuously calculates, records, and displays said heat flux data.

21.	(Original) The method of claim 5 further comprising the steps of:

(a)	generating a signal indicative of said heat flux data;

(b)	transmitting said signal to a microprocessor which continuously calculates, records, and displays said heat flux data.

22.	(Original) The method of claim 6 further comprising the steps of:

(a)	generating a signal indicative of said heat flux data;

(b)	transmitting said signal to a microprocessor which continuously calculates, records, and displays said heat flux data.

23. (Original) The method of claim 7 further comprising the steps of:

(a) generating a signal indicative of said heat flux data;

(b) transmitting said signal to a microprocessor which continuously calculates, records, and displays said heat flux data.

24. (Original) The method of claim 8 further comprising the steps of:

(a) generating a signal indicative of said heat flux data;

(b) transmitting said signal to a microprocessor which continuously calculates, records, and displays said heat flux data.

25. (Original) The method of claim 9 further comprising the steps of:

(a) generating a signal indicative of said heat flux data;

(b) transmitting said signal to a microprocessor which continuously calculates, records, and displays said heat flux data.

26. (Original) The method of claim 10 further comprising the steps of:

(a) generating a signal indicative of said heat flux data;

(b) transmitting said signal to a microprocessor which continuously calculates, records, and displays said heat flux data.

27. (Original) The method of claim 11 further comprising the steps of:

(a) generating a signal indicative of said heat flux data;

(b) transmitting said signal to a microprocessor which continuously calculates, records, and displays said heat flux data.

28. (Original) The method of claim 12 further comprising the steps of:

(a) generating a signal indicative of said heat flux data;

(b) transmitting said signal to a microprocessor which continuously calculates, records, and displays said heat flux data.

29. (Original) The method of claim 13 further comprising the steps of:

    (a) generating a signal indicative of said heat flux data;

    (b) transmitting said signal to a microprocessor which continuously calculates, records, and displays said heat flux data.

30. (Original) The method of claim 14 further comprising the steps of:

    (a) generating a signal indicative of said heat flux data;

    (b) transmitting said signal to a microprocessor which continuously calculates, records, and displays said heat flux data.

31. (Original) The method of claim 15 further comprising the steps of:

    (a) generating a signal indicative of said heat flux data;

    (b) transmitting said signal to a microprocessor which continuously calculates, records, and displays said heat flux data.

32. (Original) The method of claim 16 further comprising the steps of:

    (a) generating a signal indicative of said heat flux data;

    (b) transmitting said signal to a microprocessor which continuously calculates, records, and displays said heat flux data.

33. (Original) The method of claim 17 further comprising the steps of:

    (a) generating a signal indicative of said heat flux data;

    (b) transmitting said signal to a microprocessor which continuously calculates, records, and displays said heat flux data.

34. (Original) The method of claim 18 further comprising the steps of:

    (a) generating a signal indicative of said heat flux data;

(b) transmitting said signal to a microprocessor which continuously calculates, records, and displays said heat flux data.

35. (New)   The method of claim 3 wherein said heat flux sensors are thin-film heat flux sensors.

36. (New)   The method of claim 3 wherein said heat flux sensors are responsive to heat energy at said reference surface and said fouling surface.